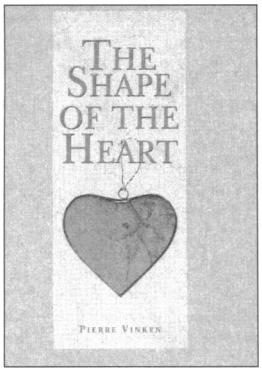
'The Shape of the Heart' by Pierre Vinken, published by Elsevier



The most universal icon in the world is the so-called 'Valentine heart', with its symmetrical concave sides and pointed apex. This scalloped heart image has become a universal and timeless symbol for love and life. In the beautifully illustrated book 'The Shape of the Heart', the author Pierre Vinken, former neurosurgeon and chairman of Reed Elsevier, tries to answer the question why the shape of such a popular icon is so different from the heart's anatomical form.

The shape of the heart has undergone a complex development. The oldest known representation is a 3000-year-old Olmec effigy vessel found in Mexico, which has a striking resemblance to the true heart. These rather realistic heart shapes can also be found in other Mesoamerican classical cultures, but cannot have had any influence on that given to representations of the heart in Europe before the sixteenth century.

The early Egyptian representations of the heart look like an urn, which is also the symbol for the heart in the hieroglyphic system. The ancient Egyptians believed that it was needed in the afterlife, since it would be weighed in the balance at judgement time. It was embalmed separately and put in a Canopic jar or urn.

Vinken seems to have studied the classical literature extensively. The Greek literature on the shape of the heart is rather sparse, although usually correct and adequate. It was described as pyramid or pinecone shaped. Figures that resemble the heart icon are common in antiquity, but they do not represent the heart; they are used decoratively and consist of a bunch of grapes or leaves (folium hederae, spade leaf or ivy). However, the great Aristotle described the shape of the heart in his History of Animals as having three cavities, the largest being on the right-hand side, the smallest on the left, and the medium-sized one in the middle. According to Vinken, this text greatly influenced the form of the heart in the visual arts.

The earliest known European representations of the heart were triangular, later with an apex pointing to the left. In some medieval anatomical plates a spot can be seen in the middle of the heart. It has been suggested that it stands for the mustard seed mentioned in Mark 4:31, which originated in the heart. Others suggest that it represents the os cordis, the heart bone, which was described by classical and medieval anatomists, but is not found in human hearts.

From the fourteenth century onwards, the scalloped heart or 'Valentine heart' appeared in the visual arts, especially in Italy. This period heralded the advent of anatomical theatres and dissection of human cadavers. How can the shape of an increasingly popular icon be so at variance with the heart's true form? According to Vinken, this can be explained by the need to show and demonstrate what the scholars of antiquity had written, which developed during the thirteenth and fourteenth centuries. And what happened was that an attempt was made to confirm the incorrect assertions about the heart in two of Aristotle's texts by giving the heart a third chamber: two large ones and the third, as it were, in between them. This could explain the existence of a dent in the middle of the base of the heart. Furthermore, the origin of the dip in the contour of the heart must also have been facilitated by the drawing of the vertical sulcus interventricularis in anatomical sketches. And last but not least, Galen already considered that what Aristotle had taken to be a third chamber was in fact a cavity in the right-hand chamber, in the broad base of the heart.

In the next centuries, late medieval anatomists and artists introduced a detailed 'refinement' into the classical contour of the heart: a dent appeared in the middle of the rounded base at the spot where the smaller third chamber was supposed to be located. In the sixteenth century, anatomists finally corrected the error but by that time the scalloped heart icon had become so established in the visual arts that it could no longer be changed. Seen from an iconographic perspective, the most striking feature in the story of the shape of the heart is that its textual description has not fundamentally changed in the course of 2500 years, while its visual portrayal has undergone a complex evaluation.

The many illustrations and concise texts make this part of Vinken's book easy and fun to read, especially for the cardiologist interested in history and cultural history, and others fascinated by the heart. The last part of Vinken's book contains a section devoted to a cave, shaped like the interior of the heart, in an allegorical painting by Jan Saenredam (1604). The representation was a creation of Hendrik Spiegel (1549-1612), an important representative of the renaissance in the Northern Netherlands. His greatest work is Hertspiegel, which has been called the first compressive Dutch poem of modern times. Vinken points out that the Antrum Platonicum, the cave in Saenredam's engraving and in Spiegel's description of it in Book three of the Hertspiegel, has the internal structure of the heart as it has been conceived by anatomists since antiquity.

In conclusion, this book about the shape of the heart by Pierre Vinken is very much worthwhile and should be present in the library of the cardiologist. ■

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